

Work Order ID 84120

84120

Page 1

Item ID: D4617-5

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: Clamp Body

Stop *NS2*

Start Date: 03/05/2012 Start Qty: 12.00

12

Cust Item ID:

Required Date: 17/05/2012 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals:

Process Plan: MLJ

Date: 12/05/03 Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D4617

A

100

Cut blanks as per folio

0.00

100

Bandsaw

Memo

0.00

Jeaspa Bandsaw

PO/B.A 12/05/07
~~FK 12/05/08~~

12

Ø

110

0.00

110

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

MILL AS PER DWG AND FOLIO FB111

FOLIO REV: AA

DWG REV: A

DEBURR

PO/B.A 12/05/07
FK 12/05/08

12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 84120

84120

Page 2

May-03-12 11:26:38 AM

Item ID: D4617-5 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Clamp Body
 Start Date: 03/05/2012 Start Qty: 12.00 ***12*** Cust Item ID:
 Required Date: 17/05/2012 Req'd Qty: 12.00 ***12*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC2- Inspect parts off machine FAI/FAIB Memo	0.00 0.00		PO/BA 12/05/07 FK 12/05/08					
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00		SL 12-05-08					
140 *140* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.00							(12) NG 12-5-9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 84120

May-03-12 11:26:38 AM

84120

Page 3

Item ID: D4617-5 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Clamp Body
 Start Date: 03/05/2012 Start Qty: 12.00 ***12*** Cust Item ID:
 Required Date: 17/05/2012 Req'd Qty: 12.00 ***12*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC7-Inspect Chemical Conversion Coat	0.00							
150						12	6	12-5-9.	
QC	Memo	0.00							
Quality Control									
160	Identify as per dwg & Stock Location: <u>1467</u>	0.00							
160									
Packaging	Memo	0.00							
Packaging									
170	QC21- Final Inspection - Work Order Release	0.00							
170									
QC	Memo	0.00							
Quality Control									

MLW 12/05/11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

May-03-12 11:26:41 AM

Page 1

Work Order ID: 84120

84120

Parent Item: D4617-5

D4617-5

Parent Item Name: Clamp Body

Start Date: 03/05/2012

Required Date: 17/05/2012

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP REV:A NEW ISSUE 12-04-13 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6B1.250X01.25 0		Purchased	No				f	25.8900		3.157895			

M6061T6B1 250X01 250

6061-T6 Bar 1.25 x 1.25

**

PO

12/05/07

Location

Loc Qty

Loc Code

MAT004

25.89



119318

25.89

3.20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

ITEM	QTY	P/N	DESCRIPTION
	X	D4617-041	EMERGENCY ESCAPE LADDER
1	1	D4617-043	LADDER WELDMENT
2	4	D4617-045	CLAMP ASSY
3	4	D4618-041	CLAMP ASSY COVER
4	2	D4621-1	DECAL
5	1	D4621-3	DECAL
6	4	D4625-1	TUBE CAP

D4617-045
CLAMP ASSEMBLY
4 PL

D4618-041
CLAMP ASSY COVER
4 PL
(SHOWN REMOVED THIS LOCATION)

D4617-043
LADDER WELDMENT

D4625-1
TUBE CAP
4 PL

(CLAMP ASSY COVERS REMOVED FOR CLARITY)

D4621-3
DECAL

D4621-1
DECAL
2 PL

D4617-041 EMERGENCY ESCAPE LADDER

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4617-041" AND BATCH NUMBER PER QSI044 6.6
- 7) WEIGHT: 6.46 lbs

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 84120 MCT
12/05/03

RELEASED
R 2012-04-10

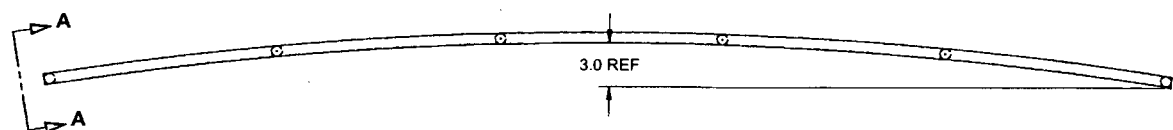
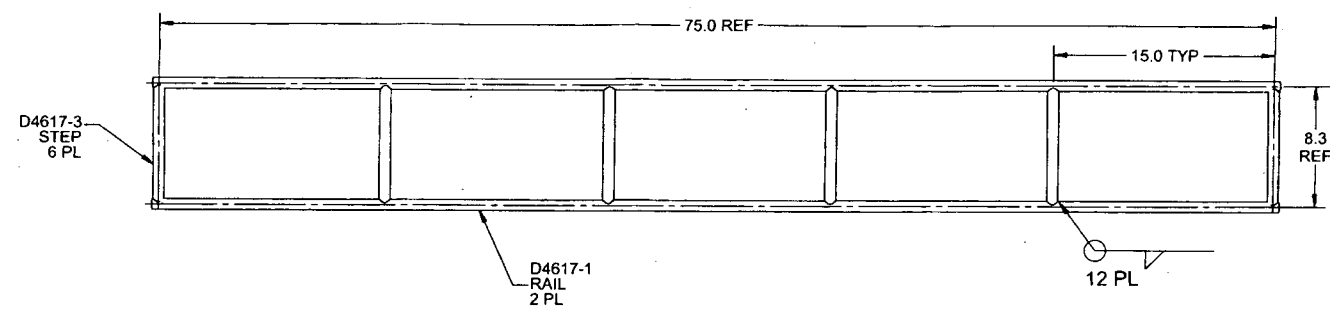
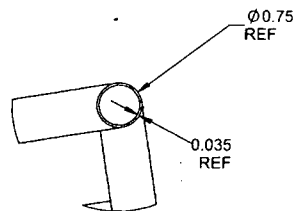
A	NEW ISSUE	RP	12.04.02
REV.	DESCRIPTION	BY	DATE
DESIGN	RP		
DRAWN	RP		
CHECKED	AD		
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	12.04.02		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. REV. A
D4617 SHEET 1 OF 5
TITLE SCALE
EMERGENCY ESCAPE LADDER NTS

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84120



D4617-043 LADDER WELDMENT

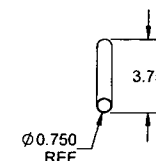
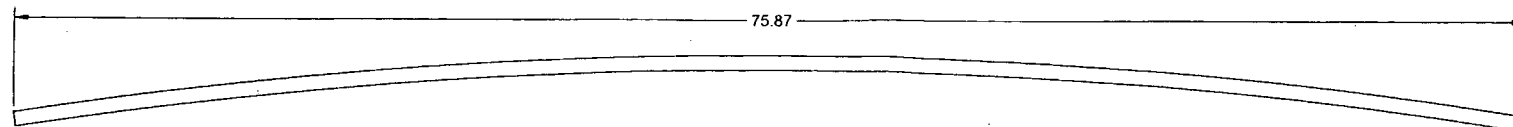
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2012-04-10

NOTES:

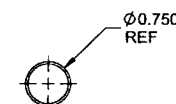
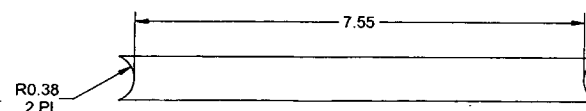
- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT FIRE RED (4.3.5.10) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER DART QSI 044 6.6
- 7) WEIGHT: 4.5 lbs
- 8) WELDING: PER DART QSI 004

DESIGN	RP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
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MFG. APPR.	E	SHEET 2 OF 5	
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DE APPR.	[Signature]	EMERGENCY ESCAPE LADDER	NTS
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84120



D4617-1 RAIL



D4617-3 STEP

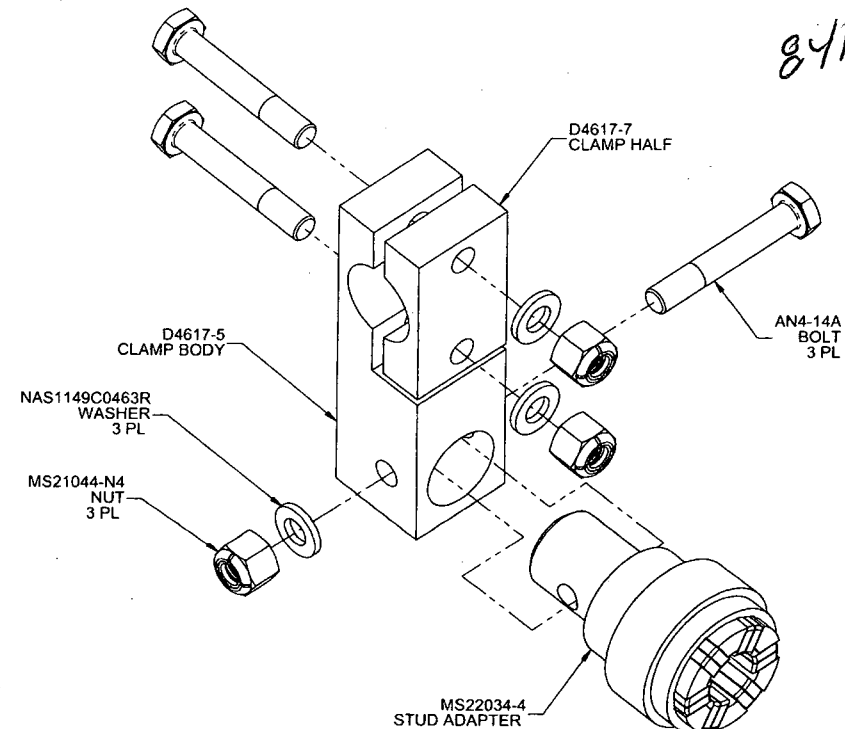
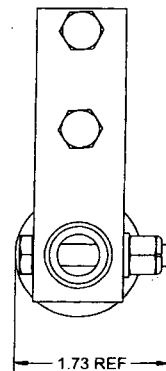
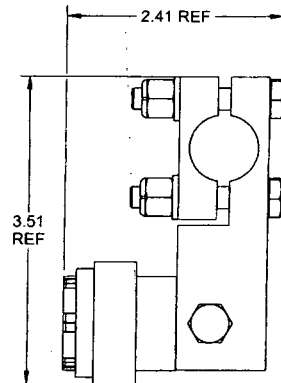
NOTES:

- 1) MATERIAL: AISI 4130N STEEL TUBING PER MIL-T6736
OR AMS6371, 6360, 6361, 6362, 6373, 6374
REF DART SPEC M4130NT0.750V.035
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER DART QSI044 6.6
- 7) WEIGHT: D4617-1 1.7lbs
D4617-3 0.17lbs

RELEASED
2012-04-18

DESIGN	RP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RP		
CHECKED	A.P.	DRAWING NO. D4617	REV. A
MFG. APPR.	<i>[Signature]</i>	SHEET 3 OF 5	
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ITEM	QTY	P/N	DESCRIPTION
	X	D4617-045	CLAMP ASSEMBLY
1	1	D4617-5	CLAMP BODY
2	1	D4617-7	CLAMP HALF
3	3	AN4-14A	BOLT
4	3	MS21044-N4	NUT
5	1	MS22034-4	STUD ADAPTER
6	3	NAS1149C0463R	WASHER



D4617-045 CLAMP ASSY

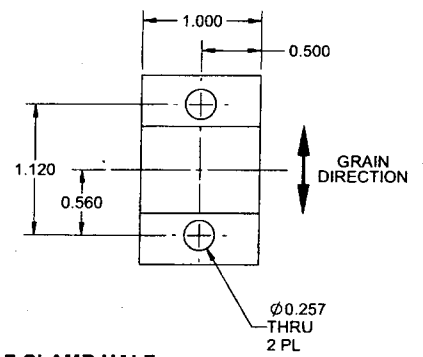
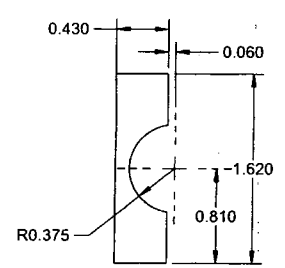
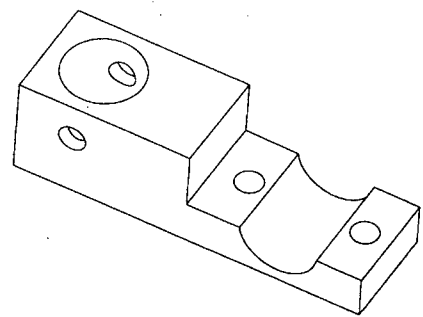
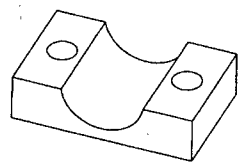
NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER DART QSI044 6.6
- 7) WEIGHT: 0.5 lbs

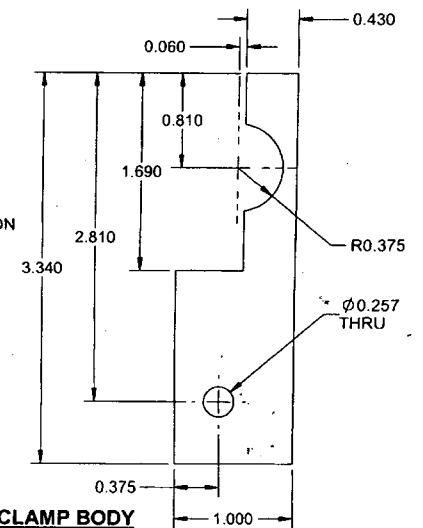
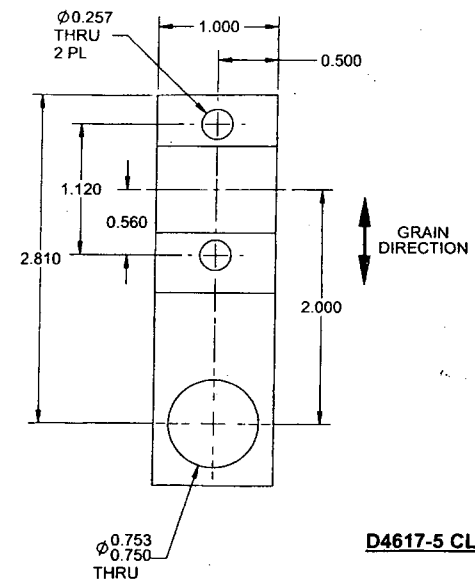
DESIGN	RP	DART AEROSPACE LTD	
DRAWN	RP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	D.P.	DRAWING NO.	REV. A
MFG. APPR.		D4617	SHEET 4 OF 5
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2012-04-18

84120



D4617-7 CLAMP HALF



D4617-5 CLAMP BODY

- NOTES:**
- 1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR
PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR
AMS 4117/4128/4115/4116 OR QQ-A-200/8
OR ASTM B211 OR ASTM B221
REF DART SPEC M6061T6B
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: PER DART QSI 044 6.6 OR 6.7
 - 7) WEIGHT: D4617-5 0.17 lbs
D4617-7 0.05 lbs
 - 8) POSSIBLE SUPPLIER: D4617-5: EAGLE P/N 212-110-06
D4617-7: EAGLE P/N 212-110-07

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2012-04-10

DESIGN	RP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RP		
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4617	SHEET 5 OF 5
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DART AEROSPACE LTD		Work Order: 84120
Description: Clamp Half		Part Number: 4617-5
Inspection Dwg: 4617	Rev: A	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1,000	± 0.010	0.999	✓		VERN	PHD-01
0,500	± 0.010	0,500	✓		"	"
2,000	± 0.010	2,000	✓		H. gauge	
Ø 0.750	$\begin{matrix} +0.003 \\ -0.000 \end{matrix}$	0.751	✓		VERN	PHD-01
2,810	± 0.010	2,809	✓		"	"
1,120	± 0.010	1,118	✓		"	"
0,560	± 0.010	0,560	✓		"	"
Ø 0,257	$\begin{matrix} +0.005 \\ -0.001 \end{matrix}$	0,258	✓		"	"
0,430	± 0.010	0,430	✓		"	"
R 0,375	± 0.010	0,375	✓		Rad gauge	
Ø 0,257	$\begin{matrix} +0.005 \\ -0.001 \end{matrix}$	0,258	✓		VERN	PHD-01
1,000	± 0.010	1,000	✓		"	"
0,375	± 0.010	0,375	✓		"	"
3,340	± 0.010	3,341	✓		"	"
2,810	± 0.010	2,811	✓		"	"
1,690	± 0.010	1,688	✓		"	"
0,810	± 0.010	0,811	✓		"	"
0,060	± 0.010	0,060	✓		PHD-09	

Measured by: PO/Ba	Audited by: SL	Preliminary Approval:
Date: 12/05/07	Date: 12-05-08	Date:

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15